METHODOLOGY FOR PILOTING, TESTING AND EVALUATION OF AUTOMATED DRIVING SYSTEM

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OVERALL OBJECTIVE FOR METHODOLOGY SETUP

To cover the steps in "PREPARE" to lay the foundations for the successful execution of the ‘DRIVE’ and ‘EVALUATE’ steps.
STEP 1: DEFINE RESEARCH QUESTIONS, HYPOThESISES & Logging Needs

- Theories & mechanisms
- Function descriptions
- Research questions
- Hypotheses
- Logging needs

Data
CHALLENGES RELATED TO SELECTION OF THE KEY RESEARCH QUESTIONS

- The impacts of automated driving are complex, far-reaching and include indirect elements, partly still unknown
  - High expectations
  - Pilot study limitations

Challenge: What to include?
Solution: To focus on main impacts feasible to assess (w.r.t. experimental procedures, logging possibilities, evaluation methods)
STEP 2: DEFINE EXPERIMENTAL PROCEDURES AND MAKE PLANS HOW TO IMPLEMENT THEM ON THE PILOT SITES

Controlled tests:
• What is allowed?
• By whom?
• Where?
• When?
• In which conditions?
• For how long?
• Etc …
CHALLENGES RELATED TO EXPERIMENTAL PROCEDURES

• Use of prototype vehicles
  • “Safety first”, evaluation needs to adapt to the safety measures of tests
• 11 Pilot sites & some supplementing studies
  • Regulations, company rules, ethics, ...

Challenge: How to come up with common, harmonized field tests that provide the needed input for the evaluation?

Solution: Good collaboration between the methodology team & pilot sites, including visits to all sites
STEP 3: DEFINE RESEARCH METHODS FOR ALL RESEARCH QUESTIONS

- Existing tools
- New tools
CHALLENGES RELATED TO EVALUATION METHODS

- Use of prototype vehicles
  - Not fully mature, controlled tests
  - All field results cannot be used as such in the evaluation
- Scenarios for socio-economic assessment
  - Effect of other, parallel trends

Challenge: How to come up with methods that provide good evidence of the impacts?

Solution: Combine best-practice solutions of evaluation tools & methods, build bridges between them, be transparent where assumptions are needed to overcome the lack of direct evidence.
MORE INFORMATION

www.L3Pilot.eu
Deliverables: D3.1-4 (to come)

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